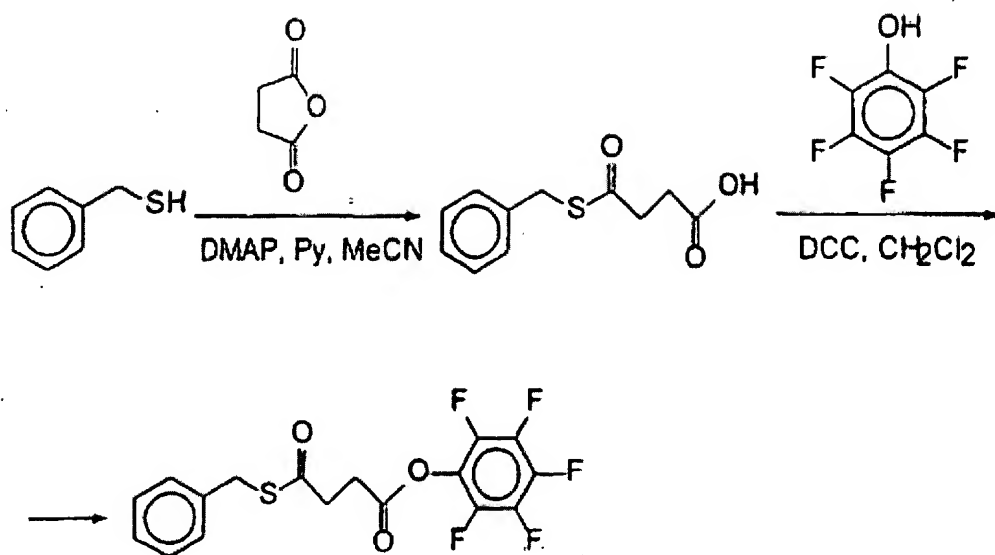


The reaction scheme illustrates the synthesis of a peptide-oligonucleotide conjugate. It begins with two starting materials: a peptide with a C-terminal phosphonate group and an oligonucleotide with a 5'-phosphate group. Both are converted to their respective amide intermediates using 1. Bns-protected amino acid derivatives and 2. 90% TFA. These intermediates are then coupled using TCEP/PtSH/DMF/aq. buffer, pH 7.5, to form the final conjugate where the peptide and oligonucleotide are linked via an amide bond.

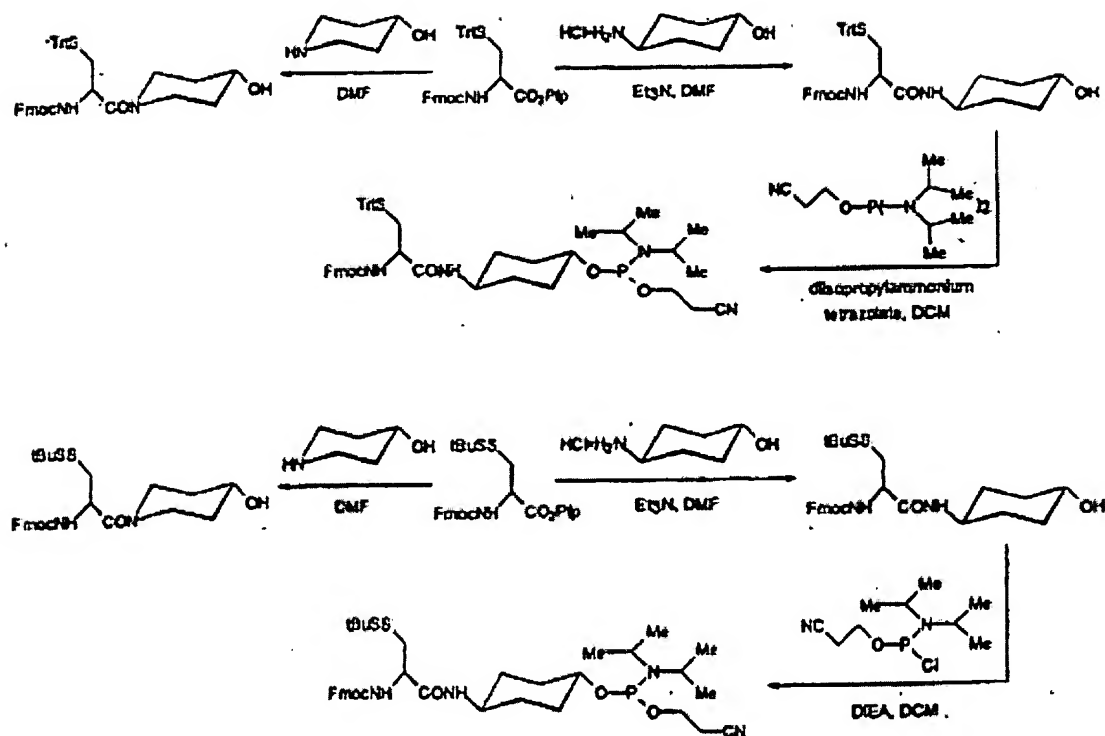
### Reaction Scheme 1

**FIGURE 2**



**Reaction Scheme 2: Synthesis of coupling reagent (III)**

**FIGURE 3**



**Reaction Scheme 3: Syntheses of coupling reagent (IV)**